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|-------------------------------|------------------------|---------------------|--|
| <b>Notice of Allowability</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                               | 10/616,504             | HILL, HENRY A.      |  |
|                               | Examiner               | Art Unit            |  |
|                               | Patrick J. Connolly    | 2877                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to 16 March 2005.
2.  The allowed claim(s) is/are 1-67.
3.  The drawings filed on 24 December 2003 are accepted by the Examiner.
4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All    b)  Some\*    c)  None    of the:
    1.  Certified copies of the priority documents have been received.
    2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

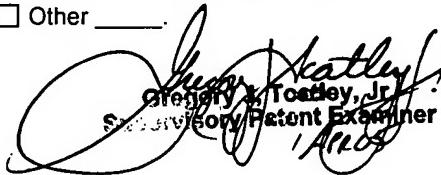
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6.  CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
  - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

#### Attachment(s)

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 12/04/03; 11/01/04
4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5.  Notice of Informal Patent Application (PTO-152)
6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_.



Gregory A. Tooley, Jr.  
Supervisory Patent Examiner

**DETAILED ACTION**

***Allowable Subject Matter***

Claims 1-67 allowed.

The following is an examiner's statement of reasons for allowance:

As to claims 1 and 32, the prior art of record, taken alone or in combination, fails to disclose or render obvious a method including: reducing the deviation of  $S(t)$  from the ideal expression using an error signal  $S_\Psi(t)$  generated from coefficients and one or more error basis function derived at least in part from the function of values of the signal  $S(t)$ , in combination with the rest of the limitations of claims 1 and 32.

As to claim 36, the prior art of record, taken alone or in combination, fails to disclose or render obvious a method for estimating coefficients of one or more errors including: calculating a quadrature signal  $\check{S}(t)$  based on the signal  $S(t)$ ; and calculating an estimate for the coefficients based on  $\check{S}(t)$  and  $S(t)$ , in combination with the rest of the limitations of claim 36.

As to claims 51 and 52, the prior art of record, taken alone or in combination, fails to disclose or render obvious an apparatus including: an electronic processor which during operation receives the interference signal  $S(t)$  from an interferometry system, receives one or more coefficients representative of one or more errors, calculates a function of values of the signal  $S(t)$  and reduces the deviation of  $S(t)$  from the ideal expression using an error signal  $S_\Psi(t)$  generated from the coefficients and one or more error basis functions derived at least in part from the function of values of the signal  $S(t)$ , in combination with the rest of the limitations of claims 51 and 52.

As to claim 53, the prior art of record, taken alone or in combination, fails to disclose or render obvious an apparatus including: an electronic processor which during operation receives the interference signal  $S(t)$  from the interferometry system, calculates a quadrature signal  $\check{S}(t)$  based on the signal  $S(t)$ , and calculates an estimate for the coefficients representative of the one or more errors based on the signals  $S(t)$  and  $\check{S}(t)$ , in combination with the rest of the limitations of claim 53.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J. Connolly whose telephone number is 571.272.2412. The examiner can normally be reached on 9:00 am - 7:00 pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on 571.272.2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

pjc *pjc*  
03.31.2005

*Gregory J. Toatley, Jr.*  
Supervisory Patent Examiner  
ARRS